

A NEW MAGNET TEST FACILITY AT LLNL,[†] J.P. Zbasnik, N.N. Martovetsky, M.E. Smith, and R. R. Manahan, Lawrence Livermore National Laboratory, Livermore, CA 94550, K. Matsutani, T. Hamajima, and S. Hanai, Toshiba Corp, Japan - We describe a superconducting magnet test facility presently under design and construction at Lawrence Livermore National Laboratory to allow long-term testing of a large-bore superconducting coil. We configure two existing helium liquefiers to simultaneously supply 4.5 K, 10 atm helium at a flowrate of 32 g/s to the coil being tested and provide liquid for a set of 40 kA current leads. A new 40 kA power supply will allow the coil to be charged and discharged at nearly 1000 A/sec. A novel, low-cost approach is used in the coil protection circuit.

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